

WHAT IS CLAIMED IS:

1. A communication control system having a data link layer which executes data transfer on a logical channel for controlling packet transfer conducted by a plurality of said logical channels, comprising:

5 means for recording, in a descriptor for recording information regarding transfer by each logical channel, information including information regarding the order of transfer by each said logical channel, wherein said data link layer includes

10 means for executing transfer by each said logical channel based on the order of transfer by each said logical channel designated by said descriptor.

2. The communication control system as set forth in claim 1, wherein

said descriptor has

5 a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

said data link layer includes

10 means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled.

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3. The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

4. The communication control system as set forth in claim 1, wherein

said descriptor has

an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

said data link layer includes

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means for temporarily stopping transfer
processing by said logical channel having said stop bit
15 recorded in said descriptor to wait for said transfer
starting condition to be fulfilled, and

means for monitoring the completion of transfer
by said logical channel having said activation bit
recorded in said descriptor to determine fulfillment of
20 said transfer starting condition for said other logical
channel designated upon the completion of the transfer.

5. The communication control system as set forth in
claim 1, wherein

said descriptor has

a number of logical channel to be activated for
5 specifying other designated logical channel having the
completion of transfer by the logical channel in
question set to be a transfer starting condition, and

said data link layer includes

means for monitoring the completion of transfer
10 by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
15 of the transfer of said logical channel.

6. The communication control system as set forth in

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claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the
5 logical channel in question is not to be executed
immediately but to be started on condition that transfer
by other logical channel designated is completed, and

a number of logical channel to be activated for
specifying other designated logical channel having the
10 completion of transfer by the logical channel in
question set to be a transfer starting condition, and

said data link layer includes

means for temporarily stopping transfer
processing by said logical channel having said stop bit
15 recorded in said descriptor to wait for said transfer
starting condition to be fulfilled, and

means for monitoring the completion of transfer
by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
20 determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
of the transfer of said logical channel.

7. The communication control system as set forth in
claim 1, wherein

said descriptor has

an activation bit indicating that completion of

00717293-11200

5 transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel
designated, and

a number of logical channel to be activated for
specifying other designated logical channel having the
10 completion of transfer by the logical channel in
question set to be a transfer starting condition, and

said data link layer includes

means for monitoring the completion of transfer
by said logical channel having said activation bit
15 recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
channel designated upon the completion of the transfer,
and

means for monitoring the completion of transfer
20 by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
25 of the transfer of said logical channel.

8. The communication control system as set forth in
claim 1, wherein

said descriptor has

an activation bit indicating that completion of
5 transfer by the logical channel in question is set to be

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a transfer starting condition for other logical channel designated,

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

said data link layer includes

means for temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion

09717293.112200

of the transfer of said logical channel.

9. The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
designated logical channel which is set to be a transfer
starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

said data link layer includes.

means for temporarily stopping transfer by said
logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
indicated by said number of logical channel to be
monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer.

10. The communication control system as set forth in claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the
logical channel in question is not to be executed
immediately but to be started on condition that transfer

09717293-11200

by other logical channel designated is completed, and

a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
designated logical channel which is set to be a transfer
starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

said data link layer includes

means for temporarily stopping transfer
processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled, and

means for temporarily stopping transfer by said
logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
indicated by said number of logical channel to be
monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer.

11. The communication control system as set forth in
claim 1, wherein

said descriptor has

an activation bit indicating that completion of
transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel

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designated, and

a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
10 designated logical channel which is set to be a transfer
starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

said data link layer includes

15 means for monitoring the completion of transfer
by said logical channel having said activation bit
recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
channel designated upon the completion of the transfer,
20 and

means for temporarily stopping transfer by said
logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
25 indicated by said number of logical channel to be
monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer.

12. The communication control system as set forth in
claim 1, wherein

said descriptor has

an activation bit indicating that completion of

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5 transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel
designated,

a stop bit indicating that transfer by the
logical channel in question is not to be executed
10 immediately but to be started on condition that transfer
by other logical channel designated is completed, and

a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
designated logical channel which is set to be a transfer
15 starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

said data link layer includes
means for temporarily stopping transfer
20 processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

means for monitoring the completion of transfer
by said logical channel having said activation bit
25 recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
channel designated upon the completion of the transfer,
and

means for temporarily stopping transfer by said
30 logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring

002217293 112200

the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

13. The communication control system as set forth in claim 1, wherein

said descriptor has

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

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means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

14. The communication control system as set forth in claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

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means for temporarily stopping transfer
20 processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

means for monitoring the completion of transfer
by said logical channel having said number of logical
25 channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
of the transfer of said logical channel, and

30 means for temporarily stopping transfer by said
logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
indicated by said number of logical channel to be
35 monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer.

15. The communication control system as set forth in
claim 1, wherein

said descriptor has

an activation bit indicating that completion of
5 transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel
designated,

09717293-112200

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

said data link layer includes

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

means for temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel

09717293 112200

35 indicated by said number of logical channel to be
monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer.

16. The communication control system as set forth in
claim 1, wherein

said descriptor has

5 an activation bit indicating that completion of
transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel
designated,

10 a stop bit indicating that transfer by the
logical channel in question is not to be executed
immediately but to be started on condition that transfer
by other logical channel designated is completed,

15 a number of logical channel to be activated for
specifying other designated logical channel having the
completion of transfer by the logical channel in
question set to be a transfer starting condition, and

20 a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
designated logical channel which is set to be a transfer
starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

said data link layer includes

09717293-112200

means for temporarily stopping transfer
processing by said logical channel having said stop bit
25 recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

means for monitoring the completion of transfer
by said logical channel having said activation bit
recorded in said descriptor to determine fulfillment of
30 said transfer starting condition for said other logical
channel designated upon the completion of the transfer,

means for monitoring the completion of transfer
by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
35 determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
of the transfer of said logical channel, and

means for temporarily stopping transfer by said
40 logical channel having said number of logical channel to
be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
indicated by said number of logical channel to be
monitored to determine fulfillment of said transfer
45 starting condition for the logical channel in question
upon the completion of the transfer.

17. The communication control system as set forth in
claim 1, wherein

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said descriptor has
an identification value and a monitoring
5 identification value as numerical data, and
said data link layer includes
means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
10 waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to
be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
15 waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
20 identification value are equal.

18. The communication control system as set forth in
claim 1, wherein

said descriptor has
a stop bit indicating that transfer by the
5 logical channel in question is not to be executed
immediately but to be started on condition that transfer
by other logical channel designated is completed, and
an identification value and a monitoring

identification value as numerical data, and

10 said data link layer includes
 means for temporarily stopping transfer
processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled, and

15 means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to
20 be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
25 logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

19. The communication control system as set forth in
claim 1, wherein

 said descriptor has
 an activation bit indicating that completion of
5 transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel

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designated, and

an identification value and a monitoring
identification value as numerical data, and

10 said data link layer includes

means for monitoring the completion of transfer
by said logical channel having said activation bit
recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
15 channel designated upon the completion of the transfer,
and

means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
20 waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to
be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
25 waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
30 identification value are equal.

20. The communication control system as set forth in
claim 1, wherein

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said descriptor has

5 an activation bit indicating that completion of
transfer by the logical channel in question is set to be
a transfer starting condition for other logical channel
designated,

10 a stop bit indicating that transfer by the
logical channel in question is not to be executed
immediately but to be started on condition that transfer
by other logical channel designated is completed, and

an identification value and a monitoring
identification value as numerical data, and

15 said data link layer includes
means for temporarily stopping transfer
processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

20 means for monitoring the completion of transfer
by said logical channel having said activation bit
recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
channel designated upon the completion of the transfer,
and

25 means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to

09717293 112200

30 be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
35 logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

21. The communication control system as set forth in
claim 1, wherein

said descriptor has

5 a number of logical channel to be activated for
specifying other designated logical channel having the
completion of transfer by the logical channel in
question set to be a transfer starting condition, and

an identification value and a monitoring
identification value as numerical data, and

10 said data link layer includes

means for monitoring the completion of transfer
by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
15 condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
of the transfer of said logical channel, and

0917293 112200

means for comparing, at the time of determination
of said transfer starting condition, a value of said
20 monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to
be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
25 on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
logical channel to determine fulfillment of said
transfer starting condition only when the value of said
30 monitoring identification value and the value of said
identification value are equal.

22. The communication control system as set forth in
claim 1, wherein

said descriptor has

a stop bit indicating that transfer by the
5 logical channel in question is not to be executed
immediately but to be started on condition that transfer
by other logical channel designated is completed,

a number of logical channel to be activated for
specifying other designated logical channel having the
10 completion of transfer by the logical channel in
question set to be a transfer starting condition, and

an identification value and a monitoring

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identification value as numerical data, and

said data link layer includes

15 means for temporarily stopping transfer
processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

20 means for monitoring the completion of transfer
by said logical channel having said number of logical
channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
25 of the transfer of said logical channel, and

means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
30 the side waiting for said transfer starting condition to
be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
35 said transfer starting condition for said waiting
logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

09717293 112200

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23. The communication control system as set forth in claim 1, wherein

said descriptor has

5 an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

10

a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

an identification value and a monitoring identification value as numerical data, and

said data link layer includes

15

means for monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer,

20

means for monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel, and

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002211 6627160

means for comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

24. The communication control system as set forth in claim 1, wherein

said descriptor has
an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

a number of logical channel to be activated for

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specifying other designated logical channel having the completion of transfer by the logical channel in

15 question set to be a transfer starting condition, and
an identification value and a monitoring
identification value as numerical data, and

said data link layer includes

means for temporarily stopping transfer
20 processing by said logical channel having said stop bit
recorded in said descriptor to wait for said transfer
starting condition to be fulfilled,

means for monitoring the completion of transfer
by said logical channel having said activation bit
25 recorded in said descriptor to determine fulfillment of
said transfer starting condition for said other logical
channel designated upon the completion of the transfer,

means for monitoring the completion of transfer
by said logical channel having said number of logical
30 channel to be activated recorded in said descriptor to
determine fulfillment of said transfer starting
condition for a logical channel indicated by said number
of logical channel to be activated upon the completion
of the transfer of said logical channel, and

35 means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to

09717293-112200

40 be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
45 logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

25. The communication control system as set forth in
claim 1, wherein

said descriptor has

5 a number of logical channel to be monitored for,
in order to monitor the completion of transfer by other
designated logical channel which is set to be a transfer
starting condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

10 an identification value and a monitoring
identification value as numerical data, and

said data link layer includes

means for temporarily stopping transfer by said
logical channel having said number of logical channel to
15 be monitored recorded in said descriptor and monitoring
the completion of transfer by a logical channel
indicated by said number of logical channel to be

09717293-112200

monitored to determine fulfillment of said transfer
starting condition for the logical channel in question
upon the completion of the transfer, and

means for comparing, at the time of determination
of said transfer starting condition, a value of said
monitoring identification value of said descriptor of a
waiting logical channel which is a logical channel on
the side waiting for said transfer starting condition to
be fulfilled and a value of said identification value of
a preceding logical channel which is a logical channel
on the side which conducts transfer prior to said
waiting logical channel and whose transfer completion is
said transfer starting condition for said waiting
logical channel to determine fulfillment of said
transfer starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

26. A method of controlling a communication control
system having a data link layer which executes data
transfer on a logical channel for controlling packet
transfer conducted by a plurality of said logical
channels, comprising the steps of:

the step of recording, in a descriptor for
recording information regarding transfer by each logical
channel, information including information regarding the
order of transfer by each said logical channel, and

002277 E627260

10 the step of said data link layer of executing
transfer by each said logical channel based on the order
of transfer by each said logical channel designated by
said descriptor.

27. The method of controlling a communication control
system as set forth in claim 26, further comprising:

 the step of recording in said descriptor a stop
bit indicating that transfer by the logical channel in
question is not to be executed immediately but to be
started on condition that transfer by other logical
channel designated is completed, and

 the step of said data link layer of temporarily
stopping transfer processing by said logical channel
having said stop bit recorded in said descriptor to wait
for said transfer starting condition to be fulfilled.

28. The method of controlling a communication control
system as set forth in claim 26, further comprising:

 the step of recording in said descriptor an
activation bit indicating that completion of transfer by
the logical channel in question is set to be a transfer
starting condition for other logical channel designated,
and

 the step of said data link layer of monitoring
the completion of transfer by said logical channel
having said activation bit recorded in said descriptor

09717293-112200

to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

29. The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer.

09717293-112200

30. The method of controlling a communication control system as set forth in claim 26, further comprising:

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a transfer starting condition, and

the step of said data link layer of monitoring the completion of transfer by said logical channel having said number of logical channel to be activated recorded in said descriptor to determine fulfillment of said transfer starting condition for a logical channel indicated by said number of logical channel to be activated upon the completion of the transfer of said logical channel.

31. The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor a number of logical channel to be activated for specifying other designated logical channel having the completion of transfer by the logical channel in question set to be a

09717293-112200

transfer starting condition, and

the steps of said data link layer of:

temporarily stopping transfer processing by said
15 logical channel having said stop bit recorded in said
descriptor to wait for said transfer starting condition
to be fulfilled, and

monitoring the completion of transfer by said
logical channel having said number of logical channel to
20 be activated recorded in said descriptor to determine
fulfillment of said transfer starting condition for a
logical channel indicated by said number of logical
channel to be activated upon the completion of the
transfer of said logical channel.

25 32. The method of controlling a communication control
system as set forth in claim 26, further comprising:

the step of recording in said descriptor an
activation bit indicating that completion of transfer by
5 the logical channel in question is set to be a transfer
starting condition for other logical channel designated,

the step of recording in said descriptor a number
of logical channel to be activated for specifying other
designated logical channel having the completion of
10 transfer by the logical channel in question set to be a
transfer starting condition, and

the steps of said data link layer of:

monitoring the completion of transfer by said

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logical channel having said activation bit recorded in
said descriptor to determine fulfillment of said
transfer starting condition for said other logical
channel designated upon the completion of the transfer,
and

monitoring the completion of transfer by said
logical channel having said number of logical channel to
be activated recorded in said descriptor to determine
fulfillment of said transfer starting condition for a
logical channel indicated by said number of logical
channel to be activated upon the completion of the
transfer of said logical channel.

33. The method of controlling a communication control
system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop
bit indicating that transfer by the logical channel in
question is not to be executed immediately but to be
started on condition that transfer by other logical
channel designated is completed,

the step of recording in said descriptor an
activation bit indicating that completion of transfer by
the logical channel in question is set to be a transfer
starting condition for other logical channel designated,

the step of recording in said descriptor a number
of logical channel to be activated for specifying other
designated logical channel having the completion of

09717293-112200

15 transfer by the logical channel in question set to be a
transfer starting condition, and

the steps of said data link layer of:

temporarily stopping transfer processing by said
logical channel having said stop bit recorded in said
20 descriptor to wait for said transfer starting condition
to be fulfilled,

monitoring the completion of transfer by said
logical channel having said activation bit recorded in
said descriptor to determine fulfillment of said
25 transfer starting condition for said other logical
channel designated upon the completion of the transfer,
and

monitoring the completion of transfer by said
logical channel having said number of logical channel to
be activated recorded in said descriptor to determine
30 fulfillment of said transfer starting condition for a
logical channel indicated by said number of logical
channel to be activated upon the completion of the
transfer of said logical channel.

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34. The method of controlling a communication control
system as set forth in claim 26, comprising:

the step of recording in said descriptor a number
of logical channel to be monitored for, in order to
5 monitor the completion of transfer by other designated
logical channel which is set to be a transfer starting

002227" E624760

condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

10 the step of said data link layer of temporarily
stopping transfer by said logical channel having said
number of logical channel to be monitored recorded in
said descriptor and monitoring the completion of
transfer by a logical channel indicated by said number
15 of logical channel to be monitored to determine
fulfillment of said transfer starting condition for the
logical channel in question upon the completion of the
transfer.

35. The method of controlling a communication control
system as set forth in claim 26, comprising:

 the step of recording in said descriptor a stop
bit indicating that transfer by the logical channel in
5 question is not to be executed immediately but to be
started on condition that transfer by other logical
channel designated is completed,

 the step of recording in said descriptor a number
of logical channel to be monitored for, in order to
10 monitor the completion of transfer by other designated
logical channel which is set to be a transfer starting
condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

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15 the steps of said data link layer of:
 temporarily stopping transfer processing by said
logical channel having said stop bit recorded in said
descriptor to wait for said transfer starting condition
to be fulfilled, and

20 temporarily stopping transfer by said logical
channel having said number of logical channel to be
monitored recorded in said descriptor and monitoring the
completion of transfer by a logical channel indicated by
said number of logical channel to be monitored to
25 determine fulfillment of said transfer starting
condition for the logical channel in question upon the
completion of the transfer.

36. The method of controlling a communication control
system as set forth in claim 26, comprising:

 the step of recording in said descriptor an
activation bit indicating that completion of transfer by
5 the logical channel in question is set to be a transfer
starting condition for other logical channel designated,
 the step of recording in said descriptor a number
of logical channel to be monitored for, in order to
monitor the completion of transfer by other designated
10 logical channel which is set to be a transfer starting
condition for the logical channel in question,
specifying said designated other logical channel to be
monitored, and

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the steps of said data link layer of:

15 monitoring the completion of transfer by said
logical channel having said activation bit recorded in
said descriptor to determine fulfillment of said
transfer starting condition for said other logical
channel designated upon the completion of the transfer,
20 and

 temporarily stopping transfer by said logical
channel having said number of logical channel to be
monitored recorded in said descriptor and monitoring the
completion of transfer by a logical channel indicated by
25 said number of logical channel to be monitored to
determine fulfillment of said transfer starting
condition for the logical channel in question upon the
completion of the transfer.

37. The method of controlling a communication control
system as set forth in claim 26, comprising:

 the step of recording in said descriptor a stop
bit indicating that transfer by the logical channel in
5 question is not to be executed immediately but to be
started on condition that transfer by other logical
channel designated is completed,

 the step of recording in said descriptor an
activation bit indicating that completion of transfer by
10 the logical channel in question is set to be a transfer
starting condition for other logical channel designated,

002217293 112200

the step of recording in said descriptor a number of logical channel to be monitored for, in order to monitor the completion of transfer by other designated logical channel which is set to be a transfer starting condition for the logical channel in question, specifying said designated other logical channel to be monitored, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

temporarily stopping transfer by said logical channel having said number of logical channel to be monitored recorded in said descriptor and monitoring the completion of transfer by a logical channel indicated by said number of logical channel to be monitored to determine fulfillment of said transfer starting condition for the logical channel in question upon the completion of the transfer.

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38. The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the step of said data link layer of comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

39. The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

09717293-112200

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled, and

comparing, at the time of determination of said transfer starting condition, a value of said monitoring identification value of said descriptor of a waiting logical channel which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

40. The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor an activation bit indicating that completion of transfer by

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5 the logical channel in question is set to be a transfer
starting condition for other logical channel designated,
the step of recording in said descriptor an
identification value and a monitoring identification
value as numerical data, and

10 the steps of said data link layer of:
monitoring the completion of transfer by said
logical channel having said activation bit recorded in
said descriptor to determine fulfillment of said
transfer starting condition for said other logical
15 channel designated upon the completion of the transfer,
and

comparing, at the time of determination of said
transfer starting condition, a value of said monitoring
identification value of said descriptor of a waiting
20 logical channel which is a logical channel on the side
waiting for said transfer starting condition to be
fulfilled and a value of said identification value of a
preceding logical channel which is a logical channel on
the side which conducts transfer prior to said waiting
25 logical channel and whose transfer completion is said
transfer starting condition for said waiting logical
channel to determine fulfillment of said transfer
starting condition only when the value of said
monitoring identification value and the value of said
30 identification value are equal.

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41. The method of controlling a communication control system as set forth in claim 26, comprising:

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed,

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated,

the step of recording in said descriptor an identification value and a monitoring identification value as numerical data, and

the steps of said data link layer of:

temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled,

monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor to determine fulfillment of said transfer starting condition for said other logical channel designated upon the completion of the transfer, and

comparing, at the time of determination of said transfer starting condition, a value of said monitoring

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identification value of said descriptor of a waiting
logical channel which is a logical channel on the side
waiting for said transfer starting condition to be
fulfilled and a value of said identification value of a
preceding logical channel which is a logical channel on
the side which conducts transfer prior to said waiting
logical channel and whose transfer completion is said
transfer starting condition for said waiting logical
channel to determine fulfillment of said transfer
starting condition only when the value of said
monitoring identification value and the value of said
identification value are equal.

42. A computer readable memory storing a control
program of a communication control system having a data
link layer which executes data transfer on a logical
channel for controlling packet transfer conducted by a
plurality of said logical channels,

said control program comprising:

the step of recording, in a descriptor for
recording information regarding transfer by each logical
channel, information including information regarding the
order of transfer by each said logical channel, and

the step of said data link layer of executing
transfer by each said logical channel based on the order
of transfer by each said logical channel designated by
said descriptor.

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43. The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program further comprising:

5

the step of recording in said descriptor a stop bit indicating that transfer by the logical channel in question is not to be executed immediately but to be started on condition that transfer by other logical channel designated is completed, and

10

the step of said data link layer of temporarily stopping transfer processing by said logical channel having said stop bit recorded in said descriptor to wait for said transfer starting condition to be fulfilled.

44. The computer readable memory storing a control program of a communication control system as set forth in claim 42,

said control program further comprising:

5

the step of recording in said descriptor an activation bit indicating that completion of transfer by the logical channel in question is set to be a transfer starting condition for other logical channel designated, and

10

the step of said data link layer of monitoring the completion of transfer by said logical channel having said activation bit recorded in said descriptor

09717293-112200

to determine fulfillment of said transfer starting
condition for said other logical channel designated upon
the completion of the transfer.

45. The computer readable memory storing a control
program of a communication control system as set forth
in claim 42,

said control program further comprising:

the step of recording in said descriptor a number
of logical channel to be activated for specifying other
designated logical channel having the completion of
transfer by the logical channel in question set to be a
transfer starting condition, and

the step of said data link layer of monitoring
the completion of transfer by said logical channel
having said number of logical channel to be activated
recorded in said descriptor to determine fulfillment of
said transfer starting condition for a logical channel
indicated by said number of logical channel to be
activated upon the completion of the transfer of said
logical channel.

46. The computer readable memory storing a control
program of a communication control system as set forth
in claim 42,

said control program comprising:

the step of recording in said descriptor a number

of logical channel to be monitored for, in order to
monitor the completion of transfer by other designated
logical channel which is set to be a transfer starting
condition for the logical channel in question,
10 specifying said designated other logical channel to be
monitored, and

the step of said data link layer of temporarily
stopping transfer by said logical channel having said
number of logical channel to be monitored recorded in
15 said descriptor and monitoring the completion of
transfer by a logical channel indicated by said number
of logical channel to be monitored to determine
fulfillment of said transfer starting condition for the
logical channel in question upon the completion of the
20 transfer.

47. The computer readable memory storing a control
program of a communication control system as set forth
in claim 42,

said control program comprising:

5 the step of recording in said descriptor an
identification value and a monitoring identification
value as numerical data, and

the step of said data link layer of comparing, at
the time of determination of said transfer starting
10 condition, a value of said monitoring identification
value of said descriptor of a waiting logical channel

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which is a logical channel on the side waiting for said transfer starting condition to be fulfilled and a value of said identification value of a preceding logical channel which is a logical channel on the side which conducts transfer prior to said waiting logical channel and whose transfer completion is said transfer starting condition for said waiting logical channel to determine fulfillment of said transfer starting condition only when the value of said monitoring identification value and the value of said identification value are equal.

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